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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.              | CONFIRMATION NO.       |
|---|-------------|----------------------|----------------------------------|------------------------|
| 10/090,054  | 03/01/2002  | Michael Fripp        | 2001-IP-004288 US1 USA           | 6736                   |
| 49431   | 7590        | 08/09/2007           |                                  |                        |
| SMITH IP SERVICES, P.C.<br>P.O. Box 997<br>Rockwall, TX 75087 |             |                      | EXAMINER<br>STEPHENSON, DANIEL P |                        |
|   |             |                      | ART UNIT<br>3672                 | PAPER NUMBER           |
|   |             |                      | MAIL DATE<br>08/09/2007          | DELIVERY MODE<br>PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

|                              |                                  |                              |  |
|------------------------------|----------------------------------|------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/090,054    | Applicant(s)<br>FRIPP ET AL. |  |
|                              | Examiner<br>Daniel P. Stephenson | Art Unit<br>3672             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 16,56-71 and 97-111 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16 and 56-71 is/are allowed.
- 6) ☒ Claim(s) 97,98,104-106,110 and 111 is/are rejected.
- 7) ☒ Claim(s) 99-103 and 107-109 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 97, 98, 104-106, 110 and 111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burleson et al. in view of Yezersky et al. Burleson et al. (Fig. 4A and 4B, col. 8 line 54- col. 9 line 49) discloses a downhole firing tool in which there is a housing (94), a piston (104), and a transitional material (122). The transitional material is disposed within the housing and can be made to block flow. When the transitional material blocks flow it impedes movement of the piston. Total blockage of the flow stops the piston while partial blockage due to the fluid will slow movement of the piston, as is the nature of transitional materials. The firing tool is attached to a perforating gun. Burleson et al. does not disclose that the transitional fluid is an MR fluid nor does it disclose a magnetic assembly to activate the MR fluid. Yezersky et al. (Fig 2, col. 3 lines 25-41) discloses a control for an MR fluid in which there are two ways of controlling the fluid. The first way is through the use of both a permanent magnet and an electromagnet, and the second is through the use of just an electromagnet. In the first system, the permanent magnet supplies a magnetic force to solidify the MR fluid in the unpowered state in which the magnetic field acts substantially perpendicular to pressure gradient. The electromagnet, when activated, will counter the magnetic force of the permanent magnet and allow the MR fluid to become fluid. In the second system the electromagnet is turned on or off to supply the magnetic force. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the activation system and MR fluid of Yezersky et al. with

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the apparatus of Burleson et al. This would be done to allow activation of the apparatus from the top of the borehole with a more reliable system that is electrically based as opposed to temperature based.

***Allowable Subject Matter***

3. Claims 16 and 56-71 are allowed.
4. Claims 99-103 and 107-109 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

5. Applicant's arguments filed 5/21/07 have been fully considered but they are not persuasive.
6. It is the assertion of the applicant that if the eutectic alloy of Burleson et al. were replaced with the MR fluid found in Yezerksy et al. then it would lose the important feature of "resetting" as it is raised from the wellbore. The examiner notes that the only reason it needs to be "reset" is because the activation is temperature based and not electrically based. The electrically based "transitional fluid" allows for the activation of the tool at a particular spot downhole without the need for resetting if the operator hasn't activated the tool.
7. It is the assertion that the Yezerksy et al. reference teaches variable length shafts and that there is no teaching to show how variable length shafts can be used in the downhole environment. The examiner notes that the shaft technology of Yezerksy et al. is not what is

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being relied upon in the rejection, but merely the teaching that the MR fluid is a transitional material, and the assembly used to activate that material could be used on other implements.

In response to applicant's argument that Yezersky et al. is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). The fluid of Yezersky et al. is pertinent to the problem at hand, as stated above.

8. It is the assertion that the combination of references would not be obvious to one of ordinary skill in the art since it would negate benefits currently present in the Burleson et al. document. The examiner respectfully traverses this assertion. Changing the transitional material of Burleson et al. to an MR fluid provides a greater degree of control as opposed to relying on the temperature change within the wellbore activation can be performed by the operator alone without the need for resetting anything.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

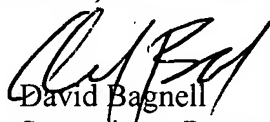
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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel P. Stephenson whose telephone number is (571) 272-7035. The examiner can normally be reached on 8:30 - 5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



David Bagnell  
Supervisory Patent Examiner  
Art Unit 3672

DPS 